REMARKS

Claims 11-21 are pending in the application, with claim 11 being independent.

Rejections under 35 U.S.C. § 103

Claim 11 covers a lubricating device comprising first and second gear stages 16 and 18, a lubricant circuit 20 and an immersion bath 28. The gear stages are mounted next to one another and are dynamically connected to one another. The lubricant circuit has at least one filter 26, a lubricant supply 38 for providing lubricant to the first gear stage, and a lubricant outlet 40 for removing lubricant from the second gear stage. Circulating lubricant is drawn from the lubricant outlet to the filter for cleaning, and is then conveyed to the lubricant supply. The immersion bath receives individually and at least partially each of the two gear stages for the gear stages to pass through the immersion bath for splash lubrication of the gear stages. The immersion bath has a lubricant reserve and a subdivision 30 separating the immersion bath into first and second bath areas 32 and 34 for the first and second gear stages, respectively. The subdivision has a configuration and the lubricant reserve has an amount such that the lubricant overflows the subdivision to be conveyed from the first bath area to the second bath area. The first bath area has the lubricant supply, while the second bath area has the lubricant outlet.

By forming the lubricating device in this manner, a good flow of the lubricant is provided throughout the entire device, avoiding stagnation areas of lubricant. The lubricant is distributed onto the first gear stage and collects in the first bath. Fluid overflowing the subdivision 30 enters the second bath for lubricating the second gear stage. The lubricant in the second bath is then withdrawn from the immersion bath via outlet 40 and is conveyed by pump 22 through the filter and then back to the lubricant supply.

Claims 11 and 14-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,279,391 to Ward in view of U.S. Patent No. 4,420,990 to Hauser. The Ward patent is cited as disclosing a lubricating device having gear stages mounted adjacent one another and dynamically connected. A lubricant circuit is allegedly provided with a filter 48, a lubricant supply 51 supplying lubricant to the first gear stage, a lubricant inlet 46 for removing lubricant from the second gear stage and circulating lubricant from lubricant outlet to the filter. Reservoir 40 is interpreted as an immersion bath. The Hauser patent is cited for a filler 18 inside a transmission casing 11 separating gears A,B,C. In support of the rejection, it is alleged that it would be obvious to provide the Hauser transmission filler in the Ward transmission to occupy space in the transmission between the gears and housing 11 in a manner that would occupy most of the space between the gears and the housing and create an individual immersion bath for each gear stage. Relative to claims 14 and 15, the Ward patent allegedly discloses a suction device, a motor pump 44, and an injection device, and a nozzle 51 mounted diagonally opposite one another in the upper and lower areas of the transmission housing. Relative to claim 16, the Ward filter unit is allegedly mounted between the pump unit 44 and gear housing 12.

Claims 17-21 stand rejected under 35 U.S.C. §103 as being unpatentable over the Ward and Hauser patents when further considered in view of U.S. Patent Pub. No. US2004/0074827 to Sann. The Sann publication is cited for a filter unit having a first fine filter 12, a bypass 22 and a coarse filter 32 connected in series with the first filter and the fineness of the coarse filter being 5 to 10 times greater than the fine filter. In support of the rejection, it is alleged that it would be obvious to use the Sann filter in the Ward system.

Claims 11-16 also stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,607,464 to Bauer in view of the Ward and Hauser patents. The Bauer patent is cited for a wind power station having planetary and spur gears 5, 9 mounted next to and dynamically connected to one another in a casing 1, but without a lubrication circuit. The Ward patent is cited for a gearing unit 10 with a lubricating circuit having a filter 48, a lubricant supply 51 providing lubricant to first gear stage 34, a lubricant inlet 46 removing lubricant from a second gear stage 24 and circulating lubricant from the inlet to the filter and then to the lubricant supply. In support of the rejection, it is alleged that it would be obvious to add the Ward lubricant circuit and filter to the gearing of the Bauer power station unit. The Hauser patent is cited relative to filler 18 which is contended would be obvious to add to the Bauer unit after being modified in view of the Ward patent as alleged above, creating an individual immersion bath for each stage.

Claims 17-21 also stand rejected under 35 U.S.C. §103 as being unpatentable over the Bauer, Ward and Hauser patents in view of the Sann publication. The Sann publication is again relied upon relative to the filter features.

Claim 11 is patentably distinguishable over the Ward, Hauser and Sann patents considered individually or in any obvious combination thereof by the combination of the separate immersion bath areas for the separate gear stages in combination with the specific lubricant flow, including the overflow over the subdivision 30. The Ward, Hauser and Sann patents fail to disclose or render such structure obvious, particularly by the failure of Ward gears 22, 26, 28, 30, 32 and 34 to pass through immersion bath sections and of the Hauser filler to have overflow between its various sections. Mere addition of the Hauser filler in the Ward housing will not

necessarily or inherently result in the immersion of separate gear stages in separate bath areas and in the overflow of the subdivision between those bath areas, as claimed.

The Ward patent discloses a dry sump mechanical transmission where only the gear 56 is immersed within lubricant 42 within lubricant reservoir 40. None of the other gears 22, 26, 28, 30, 32 and 34 are disclosed as being immersed. Thus, the Ward patent does not teach multiple gear stages immersed in separate immersion bath areas. Particularly, the Ward patent only discloses a single bath area provided by reservoir 40, and separating gears 22, 26, 28, 30, 32 and 34 from that single bath in housing 12 such that they are not immersed in that single bath (reservoir 40).

Such deficiencies in the Ward patent are not satisfied by any of the other cited patents, particularly the Hauser patent. The Hauser patent discloses a transmission having a filler 18 to occupy most of the space of the transmission between the gears A-G in housing 11. The Hauser patent fails to disclose any flow of the lubricant from outside of the housing, through the housing and then to outside the housing, or even between the various pre-elected locations 27. Specifically, there is no disclosure of overflow between the walls separating the locations 27 in the Hauser patent. Hauser cannot teach or render obvious the addition of a feature to the Ward transmission that the Hauser patent does not disclose or inherently provide.

Even if it is assumed for the sake of argument only to be obvious to add the teaching (filler 18) of the Hauser patent to the Ward reservoir, such combination would only provide a filler 18 within reservoir 42 about gear 56. One of ordinary skill in the art would not find providing the Hauser filler in the cavity 11 of housing 12 of the Ward transmission obvious since such cavity does not have an immersion bath for the gear stages located therein. The

combination would not teach providing first and second baths for first and second gear stages, respectively, separated by a subdivision 30, since neither cited patent discloses that claimed arrangement. Additionally, the proposed combination would not posses the claimed subdivision configuration and lubricant amount such that the claimed overflow would occur, again since neither cited patent discloses such overflow. This structural feature creating overflow is not addressed in the Office Action relative to the rejection of claim 11.

Thus, the subject matter of claim 11 is not rendered unpatentable by the Ward patent, the Hauser patent, or any obvious combination thereof.

The rejection over the Bauer, Ward and Hauser patents suffers from the same deficiencies discussed above relative the rejection over the Ward and Hauser patents. The Bauer patent is merely cited for a wind power station having two gear stages 5 and 9 mounted next to and dynamically connected to one another. Admittedly, the Bauer patent fails to disclose any lubrication circuit. To provide the claim 11 limitations of the lubrication circuit and immersion bath, the Ward and Hauser patents are interpreted and combined in the same manner as applied for the rejection over the Ward and Hauser patent, without the Bauer patent. The same arguments presented above apply, demonstrate that this three patent combination is untenable, and are not repeated to avoid burdening the record in this application.

Moreover, the proposed combination involves modifying the Bauer transmission by adding the Ward lubrication system and then modifying the added Ward lubrication system to add the Hauser filler. Such modification (by the Hauser patent) of a modifying reference (the Ward patent) is a well accepted indication of non-obviousness.

Accordingly, claim 11 is patentably distinguishable over the cited patents.

Claims 12-21 being dependent upon claim 11, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claim 12 is further distinguished by the gear stages being parts of a wind power station. Neither the Ward patent nor the Hauser patent relate to a wind power station. While the Bauer patent relates to a transmission for a wind power station, it does not disclose any lubrication system therefor.

Claim 13 is further distinguished by the first gear stage comprising a planet gear while the second gear stage comprises a spur gear, within the overall claimed combination.

Claim 14 is further distinguished by the suction device and the injection device being located diagonally opposite each another. Such diagonal orientation is not provided and is not shown to be provided in the Ward patent, as alleged, particularly within the overall claimed combination.

Claim 15 is further distinguished by the motor pump unit, particularly within the overall claimed combination.

Claim 16 is further distinguished by the filter mounting within the overall claimed combination.

Claims 17-21 are further distinguished by the particular filter constructions used in combination with the claimed lubricating device. Although such filter structure is disclosed in the cited Sann publication, it does not disclose the use of that filter within the particularly claimed lubricating device.

In view of the foregoing, claims 11-21 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,

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